IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Yoshiro Udagawa

Serial No.: 10/660,096

For : IMAGE SENSING APPARATUS, IMAGE SENSING METHOD, RECORDING MEDIUM, AND PROGRAM FOR CONTROLLING EXPOSURE BY CORRECTING A BRIGHTNESS VALUE WHEN AN OPTICAL FILTER IS MANUALLY INSERTED

Filed : September 10, 2003

Art Unit : 2622

Examiner: Hung H. Lam

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

In response to the second Non-Final Office Action mailed on January 7, 2010 in the above-referenced U.S. patent application, the applicants hereby request review of the such Action. Together with this Request, applicants have filed a Notice of Appeal and associated fees. Director is hereby authorized to charge any additional fees which may be required by this submission to our Deposit Account No. 03-3415.

This Pre-Appeal Brief Review Request is submitted pursuant to the procedures announced in 1296 *Off. Gaz. Office* 67 (July 12, 2005) and extended pursuant to the USPTO Notice entitled "Extension of the Pilot Pre-Appeal Brief Conference Program" signed January 10, 2006. The review is requested for the reasons stated in the attached sheets (no more than five pages attached).

REASONS FOR REQUESTING REVIEW OF FINAL REJECTION

I. Introduction

Applicants hereby request review of the rejection of the claims as set forth in the Office Action dated January 7, 2010.

Claims 1-19 are pending in this application. Claims 1, 3-6, 8, 10-12, 14-16 and 18-19 were rejected under 35 USC 102(e) as being anticipated by the Tsuda (U.S. Pub. No. 2005/0225662) publication. Claims 2, 9, 13 and 17 have been rejected under 35 USC 103(a) as being unpatentable over the Tsuda publication and claim 7 has been rejected under 35 USC 103(a) as being unpatentable over Tsuda in view of Takahashi (U.S. Pub. No. 2002/0118897). For reasons discussed below, it is respectfully submitted that the Examiner's rejections of independent claims 1, 3, 8, 10, 12, 14, 16 and 18 are improper and without basis, and are clearly based on a factual error.

II. Applicants' Invention

The claimed invention of claims 1, 3, 8, 10, 12, 14, 16 and 18 is directed to an image sensing apparatus, or an image sensing method using the image sensing apparatus, that has a filter insertion/removal device (118 in FIG. 1) operated by a user which inserts and removes an optical filter for reducing a light quantity to an image sensing element (101 in FIG. 1). In the image sensing apparatus of applicant's invention, a first brightness value, representing a brightness of a part or all of an object which is imaged on the image sensing element, is first calculated (See, brightness value calculation unit 120; step S2 in FIG. 2), and then a second brightness value is calculated by correcting the first brightness value on the basis of a light reduction amount generated by inserting the optical filter by the filter insertion/removal device

(See, brightness value correction unit 121; step S3 in FIG. 2). The second brightness value is then used for controlling the signal processing (e.g., white balance processing) performed to generate image data from an image sensing signal output from the image sensing element (step S6 in FIG. 2) or for controlling the optical system (115 in FIG. 1; step S4 in FIG. 2). The calculation of the second brightness value to correct the first brightness value allows the control of the image signal processing and/or of the optical system to continue without changing, or starting over, the signal processing and/or optical control if the filter is inserted or removed.

III. The Scope and Content of the Prior Art

The Tsuda, et al. reference discloses in FIG. 21 an image pickup apparatus that includes a luminance detecting circuit (507), which detects a luminance signal of a video signal outputted from an CDS/AGC circuit (505), and in which an iris (503) is driven based on the detected luminance signal. Paragraphs [0005]-[0008]. In Tsuda, et al., the detected luminance signal is compared with a reference value (correct exposure value), and if the luminance signal is less than the reference value, then the iris (503) is controlled to be driven in an opening direction, and if the luminance signal is greater than the reference value, then the iris (503) is controlled to be driven in a closing direction. Paragraphs [0008]-[0011]. Tsuda, et al. also teaches that a user can operate an ND-filter switching lever (510) to insert or detach a ND filter (502) into and from an optical path of a lens, and that a lens microcomputer of the image pickup apparatus detects the ON/OFF state of the ND-filter switching lever (112 in FIG. 23) to determine whether the ND filter is inserted or detached. Paragraphs [0013],[0027], [0099]. In one embodiment of Tsuda, et al., the iris (503) can be driven at a high speed or at a low speed, and the iris is controlled to be driven at high speed when the user changes the state of insertion/detachment of the ND filter by switching the ND-filter switching lever so as to

increase the speed at which the exposure is corrected. Paragraphs [0099]-[0103].

The Examiner has argued that the luminance signal output from the luminance signal detecting circuit (507) in Tsuda, et al. is equivalent to the first brightness value of applicant's independent claims. The Examiner has further argued that the camera system of FIG. 21 of Tsuda, et al. is a control feed back type system and that it is inherent that when an ND filter switching level is ON, the luminance signal circuit inherently corrects the first luminance signal and thereby outputs a second reduced luminance signal.

It will be seen that the Examiner's findings concerning the scope and content of the prior art are erroneous in the following respects:

(1) The camera in Tsuda, et al. only determines one brightness signal (first brightness value) by detecting the luminance signal, and there is no mention in Tsuda, et al. of correcting the first brightness value or of calculating a second brightness value by correcting the first brightness value on the basis of a light reduction amount generated by inserting the filter.

(2) The "control feed back type system" of Tsuda, et al. does not inherently calculate the second brightness value by correcting the first brightness value on the basis of a light reduction amount generated by inserting the filter.

IV. Differences Between Cited Prior Art and the Claims

Because the Examiner has not correctly determined the scope and content of the prior art, the Examiner also has not correctly determined the differences between the prior art and the claims. In particular, Tsuda, et al. is silent as to calculating a second brightness value by correcting the first brightness value on the basis of a light reduction amount generated by inserting the optical filter by the filter insertion/removal device operated by the user. Rather, Tsuda, et al. only teaches detecting a luminance signal of the video signal so as to determine a

first brightness value based on which the optical system, i.e. iris, is controlled, and repeating this process over time. That is, in Tsuda, et al., the first brightness value is determined periodically, and the iris is controlled after each determination based on this first brightness value. However, the second and subsequent determinations of the luminance signal (brightness value) in Tsuda, et al. are not equivalent to calculating of a second brightness value by correcting the first brightness value based on a light reduction amount generated by inserting of the filter. Instead, the second and subsequent detections of the luminance signal in Tsuda, et al. are completely new brightness value determinations, independent of the previously detected luminance signals or brightness values, and therefore, such subsequent luminance signal detections are merely new determinations of the first brightness value. In addition, in the Office Action of June 10, 2009, the Examiner has acknowledged that Tsuda, et al. "fails to explicitly disclose a brightness value correction device which calculates a second brightness value by correcting the first brightness value; and a control device which controls the signal processing in said signal processing device by using the second brightness value." See, p. 4 of the Office Action dated June 10, 2009.

Moreover, contrary to the Examiner's argument in the Office action of January 7, 2010, the calculation of a second brightness value by correcting the first brightness value based on a light reduction amount generated by inserting of the filter is not inherent in the control feed back type system of Tsuda, et al. As discussed above, the control feed back system of Tsuda, et al. merely periodically determines the first brightness value by periodically detecting a luminance signal, so that any of the second and subsequent luminance signal determinations are simply new determinations of the first brightness value and are completely independent of the previously determined brightness value(s). Since the second and subsequent luminance signal

determinations in Tsuda, et al. are not related to the previously determined luminance signal determination and are based on the total light amount, i.e. detected luminance, not on a light reduction amount, there is no, and cannot be any, inherent calculation in Tsuda, et al. of a second brightness value that corrects the first brightness value on the basis of a light reduction amount generated by inserting the optical filter.

Accordingly, the Tsuda, et al. publication does not teach or suggest calculating a second brightness value by correcting the first brightness value on the basis of a light reduction amount generated by inserting the optical filter by the filter insertion/removal device operated by the user, as recited in applicant's independent claims 1, 3, 8, 10, 12, 14, 16 and 18.

In view of the foregoing, it is respectfully submitted that the rejection of the claims cannot stand, and the allowance of the application is respectfully requested.

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Respectfully submitted,

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